

ANT/SHE/08

ARTON

PUNGER

0047

HILLS

①

1986

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Subject

Dip measurements all given using
true bearings (90° W deviation)

1/11/86

① Geografov Island - SE headland (containing SE side)

Massive charnockitic gneisses with irregular coarser grained layers. Latter have pegmatitic appearance & contain bluish quartz. Some larger (~1 m² scale) - irregular X-cutting veins of similar coarser pegmatitic also present. Thin layers & schlieren of pyroxenite present locally, in places associated with X-cutting felsic veins

Dip ~205 / 15 (irregular)

5600 Even grained felsic gneiss

5601 Mafic granulite inclusion (10m pod) in above

Mafic granulite forms pods & schlieren in the felsic gneiss

N. part of headland more heterogeneous - includes metasediments as well as orthogneiss: - gr leucogneiss, small ? calc silicate pods etc; also more mafic granulite layers & pod

Dip ~ 190/15°

5602 Even grained massive felsic gneiss

② ~2 km N of locality ①

Magfic dyke cutting massive felsic gneiss. Trend of dyke ~ 145°

Dip of gneiss ~~is~~ indeterminate - massive poorly layered, but some comp. variation - mafic schlieren, pegmatitic segregations etc.

5603 Mafic dyke (BHI pelomag)

5604 Felsic orthogneiss

5605 Epidotized, K-spar phytic rock ~~floor~~

③ ~11 km W of camp

Contorted garnet leucogneiss - some garnet-rich layers. Pegmatitic layers and X cutting veins contain coarse white feldspar. Gneiss is strongly layered.

5606 Gt leucogneiss

Many layers - schlieren are rich in
? pyroxene

(4) ~ 2 km N of camp

Layered garnet gneisses, ranging from leucocratic to very garnet-rich. Latter contain many garnets 1-2 cm across and abundant sillimanite. Some interlayered calc silicate also present (thin 10-30 cm, discontinuous)

5607 Coarse-grained garnet-silliman gneiss

5608 Finer grained gt-qtz-feld gneiss

Trend ~ 140° near-vertical dip
dip ~ 70° W strike to N

~~the~~ Some mafic granulate layers also present. Thin leucogranite veins, X cut; and larger - pegmatite dykes (10-30 cm) contain abundant muscovite and some garnet (Spec.)

Sillimanite-bearing gneisses have strong foliation - bands around large garnet X's

5609 Thin mafic dyke - Trend ~ 230° W

⑤ ~11km W of side valley to main valley

Massive orthogneiss - felsic with
irregular layering defined by mafic minerals
~~and~~ or pink K-feldspar. Latter are
coarser-grained and locally cross-cut
main trend of layering. Both type
of layering define minor tight to isoclinal
folds in some places

5610 Massive orthogneiss

Some augen of mafic minerals or K-spar
locally present. Mafic blocks define
foliation.

Outcrops between here and valley largely
gt - qtz - feldspar gneiss, with some felsic
orthogneiss

⑥ Near Northern Lake

mainly gt - bearing gneisses + some mafic
and ultramafic layers & pods

Small dyke (~1m thick) not well exposed

5611 Dyke from marginal zone

⑦ SW side of valley with elongated lakes

massive felsic gneiss cut by thin (~1m thick) mafic dyke

5612 Mafic dyke

⑧ Prominent knoll

Massive felsic orthogneiss with pink felsic layers & cross-cutting veins

5613 Felsic gneiss

4

18/11/80

Geograpov Island - W side

- ⑨ Layered gt - qtz feldspar gneiss +
massive pyroxene gneiss

SB14 melanocratic pyroxene gneiss

- ⑩ Layered gneisses more abundant -
gt - qtz + feldspar gneiss + dark
grey pyroxene gneiss
Cut by late pink granite bodies
(12' inches across). The granite ranges
from even-grained to quite pegmatitic
Dip $40^\circ / 340^\circ$

SB15 Garnet leucogneiss (+ kistite)

SB16 Grey pyroxene gneiss

SB17 Pink granite

Just to south is a dolerite dyke,
not well exposed and rather sheared

SB18 mafic dyke

(11) S. side of large lake

Mafic granulate with some more felsic segregations (blue-pts), as well as mafic segregations (coarse-grained pyroxene).
Cut by thin (few cm) ^{to 10 cm} pink granite veins, similar to last locality.

5619 Mafic granulate

(12) Near smaller lake

mainly massive rather mafic pyroxene gneiss below here > last locality but also some white, strongly layered garnet-rich gneiss. Some pink cordierite noted in garnet-rich layers.

5620 Garnet - quartz - feldspar (+ biotite) gneiss

5621 layer with gt, biotite & pink cordierite

19/1/86

Geografor Island - SE section

(13) Main peak

Massive charnockitic orthogneiss
(brown-weathering). Some coarser grained
patches contain bluish quartz. Cut
by v. small (cm scale) shear or
mylonite zones. Dip ~~175~~¹⁷⁵° / 20°

5622 massive felsic orthogneiss (2 pieces)

(14) Outcrop WSW of above

Massive felsic orthogneiss with marked
foliation, but little banding. Some
rather irregular mafic layers are
present. Gneiss is brownish-
weathering, but pinkish grey on
fresh surfaces. Dip near horizontal

5623 massive felsic orthogneiss

5624 mafic granoblastic layer

(15) Bluffs WSW of (14)

Well layered and foliated, but
rather massive felsic orthogneiss.
Some mafic granoblastic and layered
pyroxene - qtz - feld gneiss. Also
rusty-weathering leucocratic layered
(? granite). Irregular layers and
veinlets of qtz (blue) + feldspar
Dip $200/40^\circ$

5625 massive felsic gneiss

(16) Bluffs ESE of (14)

Mostly massive orthogneiss like last
locality, but more abundant mafic/
ultramafic granoblastic. Latter is sub-
concordant with foliation in felsic
gneiss, but contacts are irregular
with some degree of reaction. Some
mafic schlieren and inclusions in
gneiss.

5626 massive felsic gneiss

(17)

Chfbs SE of main peak

Similar massive felsic gneiss with
some mafic layers. latter are also
fairly massive but have some iron-rich
layers & aggregates (pyroxene?)

Dip $160^\circ / 40^\circ$

Small shear zone trends $\sim 055^\circ$

5627 massive felsic gneiss

20 / 41 / 80)

Thomas Island

(18)

N of W end of large central lake

Layered pyroxene gneiss, felsic gneiss
& st-rich gneiss. Dip $\sim 170^\circ / 65^\circ$

Tight to isoclinal folds plunge steeply
& are folded by near vertical structure

Some v. st-rich layers locally, but
also much orthogneiss & some quite
mafic granulites

5628 felsic gneiss

Dips directions are variable, but steep ($60^{\circ}+$). Steeply plunging more open folds are present.

Rocks cut by thin irregular pegmatitic veins.

(19) Hwy central narrow in lake

Similar layered pyroxene gneisses to last locality. Some more granitic layers. Massive granitic layer is less foliated but mafics are streaked out and there is a diffuse contacted layering. Inclusions of mafic granulate are present. All rocks cut by vertical mylonite zone.

On S side of lake, steeply dipping gneiss is folded by microscopic tight to more open folds (steeply plunging?).

5629 granitic gneiss

NB Boulder in Inverness has
pink granite - diorite contact
Latter is steep, but not the granite,
suggesting granite intrudes the dyke

Pegmatite cuts folded gneiss (tight to
isoclinal, steeply plunging minor
folds, refolded by more open, also
steeply plunging folds). Pegmatite
is cut by mylonite (dip $\sim 80^\circ/260^\circ$)

5630 mafic granulite

(20) Just east of above

Layered garnet-biotite gneiss, with some
interlayered mafic granulite. Early isoclinal
fold cut by irregular pegmatite veins.
Gneiss is ~~then~~ also strongly folded by
more open to tight steeply plunging
folds (S. 2) ~~etc~~ which probably
post-date isoclinal. General dip $160^\circ/70^\circ$

5631 Garnet-qtz-feldspar gneiss

(21)

N. Cape of Thomas Island

N part (main) of cape is layered felsic gneiss (some pink massive granitic gneiss + typical dk brown-weathering gneiss) and several metre thick bands of mafic granulite. Granite gneiss contains elongated mafic blebs (biotite?) and some subcordate coarser grained pink pegmatitic layers. There are also some grey, even grained more melanocratic layers. Rocks are cut by black mylonite zone.

Dip $190^\circ/75^\circ$ (gneiss)

5632 Pink granitic gneiss

5633 Dark felsic gneiss

Outcrop near "neck" is largely well foliated garnet + biotite (+ sillimanite?) gneiss

Dip $190^\circ/70^\circ$

5634 Bi - Ct gneiss

(22) Knoll WSW of above

Garnet - kyanite - ? sillimanite gneiss
Strongly foliated; dip steep to W
but hard to determine accurately
5635 St - Bi gneiss
Some layers rich in garnet, others rich in
kyanite

21/1/86

(23) W side of Thomas Island, SE of eastern
end of Edisto Inlet

Layered garnet gneisses, with many
veinlets, partly discordant, of pegmatite
A few qtz-rich pods and boudins
Some minor, intrafolial fold
A few thin mafic (kyanite &/or pyroxene-rich)
layers. Dip $\sim 135^\circ$ ~~W~~ / 30°

5636 Garnet gneiss

(24) ~ 1 km S of above

Layered gneiss, felsic gneiss
and mafic pyroxene granulite.

Strong foliation and compositional
layering dip $145^\circ / 30^\circ$

Cut by thin (~ 60 cm) mafic
dyke trend 95°

5637 mafic dyke

5638 Garnet gneiss

reaches a small pink pegmatite out
the gneisses. One margin is a
mylonite zone which appears to
predate the pegmatite, although the
latter is also somewhat deformed.
They might be roughly co-eval.

(25) Prominent knot on S side of road

Similar layered gneiss, steeply
dipping with tight to open S + Z

folds (geniculate type typically/
much of gneiss is relatively massive
with granitic (qtz-feld) layers and
regulations. Bands of glt + biotite
are commonly thin and discontinuous,
i.e. gneiss looks as if has been
considerably mobilized.

Cut by ~ 75cm dolerite dyke
tend ~~45°~~ ~135°

5639 Gneiss gneiss (2 pieces)
5640 Dolerite dyke

About 2km east of above there
is much meta/ultramafic material
interlayered with the gneiss gneiss, as well
as pods, boudins. The gneiss
is quite migmatitic here with much
veining by granitic material. The gneiss
layers become broken up & schlieren
and melanocratic layers occur throughout
the granitic material. However, contacts
are relatively sharp - therefore the

granite may well be intrusive, as
opposed to an in-situ melt.

Composition of gneiss inclusions is
not obviously different from
gneiss without granite veins.

5641 Granite veining the gneiss

(26) ~1 km East of Knoll

Layered, contorted, rather migmatitic
garnet-kyanite gneiss with ? cordierite
gneiss is extensively plastically
folded, cut by many small mylonite
zones.

Some pods of mafic material (granulite)
and massive felsic gneiss. Also many
thin pegmatite segregations.

5642 Garnet gneiss

Knoll ~ $\frac{1}{2}$ km further east
consists of massive orthogneiss (charnockite)
with interlayered mafic granulite

Rocks are moderately well layered,
but dip is variable from steep to
moderate. Mafic layers are rather
veined and agmatized

5643 Massive orthogneiss

Just to east, rest of outcrop is
mainly garnet gneiss cut by a
thin (15cm) mafic dyke. Dyke cuts
mylonite (pseudotachylite veins)

5644. Thin mafic dyke

22/1/86

② N side of Thomas Island

Garnet gneiss - rather massive and
quartz-rich, but some more foliated
with weathering layers. Dip $340/20^\circ$

Minor isoclinal folds present

5645 Qtz-rich garnet gneiss

(28) ~ 1 km W of bluff on N side of
Thomas Island

Layered gneiss & gneiss, felsic gneiss
(with rare gneiss & biotite). Rather
migmatitic with pegmatitic layers
and segregations (blue qtz). Cut by
large pink pegmatite. Minor
tight to isoclinal folds present.
Cut by shear zone.

All cut by 20m wide dyke -
trend $\sim 135^\circ$

Dip ~~175~~ $110^\circ/10^\circ$ (gneiss)

5646 ~~175~~ Mafic dyke (BH2)

5647 Granitic gneiss with pt - bi
layers

5648 St Bi gneiss

Eastern end of outcrop is mainly
layered pyroxene gneiss - felsic +
subordinate mafic - cut by thin
grey pegmatite. Dip $\sim SE$ at 20° ,
overlying st gneiss

5649 Felsic pyroxene gneiss

(29) S side of large lake

Interlayered felsic gneiss (charnockitic - rather speckled appearance in some layers defined by mafic aggregates), garnet-mica gneiss, & mafic granulite strongly folded about steeply plunging axes. Open to tight folds, commonly granulate.

Axial plane $\sim 205^\circ/20^\circ$
axis $\sim 115^\circ/70^\circ$ }

Other folds nearby (1-2m amplitude) have axial traces trending $\sim 70^\circ$, steep dip, but difficult to measure. Some refolded isoclinal may be an earlier fold phase.

Mafic granulite layers partly boudinaged, at one place definitely discordant to foliation in gneisses. May represent an early mafic dyke suite.

Some garnet-bearing ultramafic pods

5650 mafic granulite

5651 felsic gneiss (charnockitic)

X-cutting mylonite zone trends ~E-W

fold to W, AP ~~200~~¹⁹⁵° / ~80, plunge near vertical

5652 garnet-biotite gneiss

1/2 km further west

more upright to mod open folds
of ~200°/80, plunge steep to E
to larger of gneiss, felsic gneiss
& mafic granulite. All cut by
irregular pink pegmatitic veins

ap ~205°/75, plunge mod to E

(30) S of W end of lake

Similar gneiss gneiss, mafic granulite,
felsic gneiss (granitic) cut by granite
veins, white subconformable pegmatite.

All cut by thin mylonites (& numerous)

Dip of main fold (right)
¹⁹⁵
~ ~~195~~/80 plunge 85° / 105

5653 Garnet gneiss

23/1/86

③1 Thomas Island cark

Layered garnet-biotite gneisses,
rather massive migmatite, cut by
sub-concordant (but locally X-cutting)
granite layers (perhaps even gneiss)
latter cut by thin pink pegmatite
Dip ~ $135^\circ/85^\circ$

Some thin (10's cms) basic granulate prob. int.
Dolomite dyke abundant.

Oldest thick gabbroic dyke
(trend 335°) about ^{40m} ~~25m~~ thick,
cut by fine grained dyke (trend ~
 $300-320^\circ$). This is cut by dyke

about 3-4 m thick, trend ~ 335°.

A second thin (80 cm) dyke is
cut by this one (trend ~ 335°)

5654 Older thick dyke (BH42)

5655 300-320 trend, thin dyke (BH41)

5656 thin dyke trend ~ 335 (BH43)

5657 3-4 m dyke trend ~ 335 (BH44)

5658 felsic intrusive larger
(coarse grained granite)

5659 felsic gneiss with minor garnet

1/2 km W

Large (50m) dolerite cuts gneiss & pink
pegmatite. Trend ~ 325° (dyke) (BH45)

5660 Dolerite dyke (~ 1 km from contact)

(32) S of large bluff

Layered felsic gneiss, some garnetiferous
layers, but much is g/f & feldsparitic
Gt not very abundant

5661 felsic gneiss

many pink pegmatite
segregations
Dip 130/85

(33) Just east of large lake

massive, but layered felsic gneiss
with some garnet. Dip 135/80

5662 Felsic gneiss with rare garnet

(34) Bluffs NW of camp

massive felsic pyroxene gneiss; well
foliated (can align kistite)

Dip ~~255/45~~ 255/35

Some more mafic layers - rather boudgeled

5663 Massive felsic gneiss

5664 Mafic granulite

Thin pegmatitic veins cut both mafic
and felsic gneiss

Outcrop to SE is layered pyroxene gneiss,
generally more mafic than last locality
Dip $170^{\circ}/60^{\circ}$

Outcrop W of camp is layered
garnet gneiss
Similar dip $195^{\circ}/75^{\circ}$

26/1/86

③ NE of Geografer Island

Massive felsic pyroxene gneiss
dip $300/40$

Cut by 2 dolerite dykes

Thin (40cm) trend 135

Thick (12m) trend 150°

5665 Felsic gneiss

5666 Thin dolerite (BH4)

5667 Thick dolerite (BH3)

(36)

N of last locality

Layered garnet gneiss, with some
mafic granulate; filled about mid
plunging axes (open, microscopic
folds)

Dip 320/30
335/45

5668 leucocratic garnet gneiss

5669 layered garnet gneiss

5670 mafic granulate

More massive felsic gneiss ^{minor} with garnet

5671 felsic gneiss (trace garnet)

(37)

~~37/6~~

NE Geografar Island

layered garnet gneiss, some garnet
qtzite, thin pyroxenite lenses.

Also some rusty weathering charnockitic
gneiss Dip 255/20

5672 garnet gneiss
5673 garnet gneiss

(38) SW Geograpov Island

Layered garnet gneiss, pyroxene
gneiss and mafic granulite.

Rather variable comp - strongly layered
Pink granite (even grained)

5674 garnet gneiss
5675 mafic granulite
5676 pink granite

C. R. G. E.

27/1/86

SW Burger Hills

(39) New CTW camp (E of lake)

Alkaline dyke (15cm) cuts - 2m thick
flat-lying dolerite. ~~Thin~~ Dip of
alkaline dyke $150^\circ/60^\circ$.

Country rocks of layered mafic gneiss

with some garnet - dip. 330/60
Interlayered mafic granulite and
more garnet-rich metasediments

- 5677 Alkaline dyke (BHS)
5678 Dolerite dyke (BH6)
5679 Felsic gneiss with minor
garnet

SE of lake

Layered garnet-bearing gneisses
of variable compositions - felsic with minor
garnet to st.-rich layers (latter
are rather weathered). Some mafic granulite
layers. Dip highly variable (Fe folds
plunge at fairly shallow angles, tight.)

- 5680 Felsic garnet gneiss
5681 Layered garnet gneiss

(40) S of lake

St.-rich gneiss; much contorted
with felsic subconcordant layers

Dolerite dyke not well exposed,
but probably flat ~~to~~ lying like
that at previous locality

5682 Dolerite dyke

5683 Garnet-sillimanite gneiss

(41) S of large lake, S of camp, across inlet

Largely gneisses including felsic gneiss
with minor garnet - massive, probably an
orthogneiss; gt-sill gneiss; mafic
granulite and gt-qtzite

5684 Felsic garnet gneiss

5685 Gt Sill gneiss

~1 km to NNE ↓ more massive felsic
gneiss with minor garnet. Dark grey
characteristic appearance on fresh
surfaces

5686 Massive felsic garnet gneiss

(42) ~1 km to NE

Garnet gneisses cut by ~~conglomerate~~
? plagiophytic dolerite dyke (not
found in situ)

5687 Porphyritic dolerite dyke

(43) NE end of valley, top of island, S
of camp

Garnet gneisses cut by 3 sub-parallel
dolerite dykes (prob. same suite)

Trend $\sim 120^\circ$, thickness 70 cm

5688 Dolerite (BH7)

5689 Thin dolerite cutting gneiss

Island also gr-bearing gneisses of
various types

(44)

Hill south of camp

Layered garnet gneisses with some
pegmatitic segregations - rather
micaceous. Folded by F_2 mesoscopic
folds. Dip $335/60^\circ$ but variable.

Cut by small flat-lying dolerite
dyke

5690 Dolerite dyke (BH8)

5691 Garnet gneiss

5692 Felsic gneiss with minor garnet

28/1/86

(45)

SW Nck of Obencher Hill

Massive charnockite + some mafic
layers + borders.

5693, 4 massive charnockite

(46) Bluffs near SW end of Okemuch Hills

Mainly massive felsic opx gneiss
with mafic granoblastic layers and
some interlayered garnet-bearing gneiss.
Latter include v. massive white garnet
leucogneiss, and gr-bk gneiss

Dip $\sim 190^\circ/15^\circ$

5695, 6 Massive charnockitic gneiss

5697 Mafic granoblastic

5698 Gr. leucogneiss

(47) Central Okemuch Hills

Dip $135/42^\circ$

Massive Charnokitic with large
~~mafic~~ mafic layers (10-20 in thick)

5699 Charnokitic gneiss

5800 Mafic granoblastic

(48)

Central Obruchev Hills

Layered pyroxene gneiss (felicit)
 with some magic layered and white
 weathering aplitic gneiss dip 180/25
 Cut by dolerite dykes trend 120-125

5801 Felicit charnockitic gneiss

5802 Dolerite dyke trend 125°
 thickness ~ 5m (BH9)

5803 Dolerite dyke trend 120° (BH10)

5804 White aplitic layer (2 pieces)

5805 Pyroxene gneiss - fairly
 melanocratic

(49)

NE Obruchev Hills

Layered to massive charnockitic
 felicit gneiss; some ^{thin} pyroxenite layers
 > mafic granulite. Dip ~ 160/65

5806 massive charnockitic gneiss

5807 massive charnockitic gneiss

(50)

N. Orcher Hills

Massive charnockitic gneiss

Dip 110/30 cut by

8m dolerite dyke trend 120°.

Felsic gneiss contains some

pegmatitic layers; some mafic granulite

Cut by pink biotite pegmatite

5808 Felsic gneiss layer (light coloured)

5809 Charnockitic gneiss

5810 Pyroxene gneiss

5811 Dolerite dyke (BH11)

30/1/86

(51)

W. Charnockite Pen

Massive charnockite — coarse, megacrystic
intending more even grained melanocratic
rock; almost aegirite locally
more abundant even ^{grains} - charnockite

at this locality

Cut by dolerite dykes,
most trending about 130° . Older
dykes are possibly sym-plutonic -
somewhat bondroged and cut by
mylonites; latter also post date dolerites.
Trend of older dykes rather variable -
folded.

5812 Dolerite dyke ~12m, trend 135°
(BH12)

5813 Older mafic dyke

5814 Fine grained charnockite

5815 Slightly coarser grained charnockite

5816 Coarse charnockite

5817 Fine gr charnockite

5818 Dolerite dyke - trend 130° , ~4m
~~5818~~ (BH13)

(52) Bluff just S of camp

Layered garnet gneiss, pyroxene gneiss
etc. Rather migmatitic with felsic
segregations. Steeply dipping - F_2 folds
plunge $\sim 160/30^\circ$

5819 Garnet gneiss

5820 Pyroxene gneiss (2 pieces)

Ridge SSE of camp (near 44)

Layered gt - heavy gneiss and pyroxene
gneiss

5821 Gt - Bt gneiss

(53) 1.4 km E of camp (just E of big Bluff)

Layered felsic pyroxene gneiss
with thin mafic granulite layers
Dip $150^\circ/50^\circ$

5822 Felsic pyroxene gneiss

Bluff E of camp

Largely garnet gneisses cut by
dolerite dykes, trend $\sim 130^\circ$

Fine grained dykes (usual) range
from ~ 70 cm to 2 cm, and
coarser-grained unparallel dykes
is up to 4 or 5 m across. Contact
between 2 is preserved, but age
sequence not clear

5823 Coarse dolerite dyke (BH14)

~~5823~~ 5824 Fine grained dyke (BH15)

5825 Same as previous

31/1/86

(54) East Charnockite Peninsula

massive charnockite - coarse-grained
masses (Ksp megacrysts), but some
fine even-grained dykes (10 cm - 2 m)
No mafic dykes here

5826, 7 Even-grained dykes

5828-3#1 Coarse-grained charnockite

(55) Geomorphology Pen

massive coarse-grained charnockite with some thin lighter even-grained dykes (10cm). Cut by pink, rather pegmatitic granite. All cut by dolerite dykes. Large (8-10m), trend $\sim 140^\circ$ (rather variable) & small (~1m), trend $\sim 105^\circ$. mylonites post-dates pink granite

5832 Thin dolerite (10x trend) (BH16)

5833 Thick dolerite (140 trend) (BH17)

5834 Pink granite

5835, 6 Coarse charnockite

(56) Peninsula to South

massive charnockite cut by mylonite zones, where charnockite becomes rather bleached and pinkish Pink granite

veins ~~is~~ also cut by mylonites

5837,8 Masawe, coarse-grained
charnockite

⑤ Salam Island

Layered, but migmatitic gk bi ($\pm$ cord)
gneiss. Much granitic material with
gk bi schlieren & layers. Much
metakalibration. Dipy variable, but
approx 060/45. Cut by
numerous dolerites of rather variable
trend and thickness

- 5839 1m dolerite (BH18) trend 160
5840 1m dolerite (BH19) trend 140
5841 25m dolerite (BH20) trend 140
5842,3 gk bi gneiss
5844 Granitic material with some garnet
~~5844~~

58) Stoney Island

"Charnokitized gabbro" looks like mafic granulite with some bits of plag. visible.

Cut by pink granite / pegmatite veins. Also by thin grey aplitic dykes (10-30 cm across) Shear zones also present

5845-7 Mafic granulite (gabbro)

5848 Felsic vein

2/2/86

59) N Cachalot ~~Pennine~~ Is

Metagabbro and migmatized garnet gneiss. Gabbro prob. intruded older rocks but contact strongly deformed, so no direct evidence. Some mafic granulite layers in gneiss prob. represent mafic dykes, perhaps comagmatic with gabbro

gneiss contain gr + biotite, and
range from layered to ~~to~~ highly
migmatitic with much granitic material
and schlieren - masses of gr-bearing
material

5849 mafic granitoid layer in gneiss

5850, 1 Metagabbro

5852 Layered gr bi (? cont) gneiss

5853 Massive granitic gneiss with
gr-bearing aggregates and
schlieren

Massive gneiss is clearly migmatized
and contact with gabbro is
quite irregular, but generally
concordant.

(60) S Cachalot Is., W end of Lake Lake

5854 Massive garnet-bearing felsic gneiss

5855 Layered gr-bi gneiss

5856 Massive leucogneiss (poorly layered)
with garnet

Largely garnet gneisses of various compositions, with some massive granitic layers; some dark, charnockitic layers also, contain garnet

Dip $\sim 065/70^\circ$, but ^{rather} variable

Just to S is largely pyroxene gneiss, including rather melanocratic gneiss and mafic granoblastic

Dip $280/65$, but rather ~~g~~ variable

~~5857, 8~~

5857, 8 Pyroxene gneiss

5859 mafic granoblastic

The mafic rocks are rather largely and variable in composition, but generally comparable to metagabbros + some felsic layers. The mafic contain pegmatitic areas and layers, and some ultramafic (? pyroxenite layers)

Thin mafic dykes cut garnet gneiss

5860 mafic dyke (trend ~ 150 , 30 cm thick)

5861 V. massive granitic gneiss with garnet (hipersthinitic garnet gneiss)

(Kutty - weathering sillimanite - bearing layers are interlayered with other garnet gneisses

5862 Sil-gt gneiss

(61)

~~N end of main continental outcrop~~
Small island in centre of 3

Rather massive but layered garnet gneiss - migmatitic.

5863 ~~is~~ massive garnet gneiss

(62)

N end of main continental outcrop

Massive blue pyroxene gneisses cut by dolerite dykes. Dip ~ variable (strike roughly SE). Some tight fold observed

5864 Thick (12-15m) dolerite trend 120 (BH21)

5865 Thin (70cm) dolerite trend 140 (BH22)

5866, 7 Massive pyroxene gneiss

(63) Head of Long inlet

Mixed sequence of garnet-gneiss, pyroxene gneiss etc. Pyx gneiss is rather friable, with much biotite. Some dark pyroxene gneiss contains garnet, but has appearance of charnockitic type gneiss.

Dip ~

- 5868 Garnet gneiss
- 5869 Felicit gneiss with biotite
- 5870 Massive felsic gneiss
- 5871 Massive felsic gneiss with garnet

(64)

NE Fichtel Bay

Gneisses dip 258/35

gt gneisses mainly, including gt quartzite, plus massive felsic pyroxene gneiss layers, and some mafic granulite. Volcanic dyke (30m thick trends 120°)
gt gneisses are mainly qtz-rich

- 5872 thick dolerite dyke (twd 125°) (BH23)
 5873 massive pyroxene gneiss
 5874,5 St quartzite

~~49/16~~

3/2/86

(65) Near 2 lakes ~ 2 km ESE of Dobrowolke

Layered gneiss gneisses cut by dolerite
 dykes. Some small calc-silicate
 pods (diopside? phlogopite)

Gneiss masses mostly typical of many
 other localities - some alluvial locally.

Dip 345/65

- 5876 Gneiss
 5877 Dolerite dyke (5m twd 150°) (BH60)
 5878 Megacrystic granite - float

(66)

1 km W of above

Pink felsic gneiss cut by dolerite
 dyke ~ 20cm, subhorizontal

- 5879 Felsic gneiss
 5880 Dolerite dyke

(6) Elm, Kluen Dobrovolskiy Camp

St. green in E-Gv green
Steeply dipping. Some mafic
granulite lenses

5881 Gt green

4/2/86

(68) N Okencho Hills

Rather layered brown-weathering
pyroxene green. Much is rather
w. lam. - cratic, much is leucocratic
and paler-weathering. No typical
dark grey, chondritic green

Dip 160/20

5882 Pyroxene green ↗

5883 Leucogreen ↘

(69) Jones Rocks (main o/c)

Finely, strongly layered rocks
including much quartzite (impure). Biotite
is conspicuous in st. foliated, schistose
metasediments, but no sedimentary notes

Dip 125/20 lineation (qz nodding)
= 180/10

Mafic granite pod & gneiss
quite abundant.

All cut by white to pink mod coarse
even-grained granite, grading
into pegmatitic material. Part of
the granite is subconcordant with
mafic schlieren and weak foliation.
Also strongly X cutting pegmatite
dykes

5884 ~~Ma~~ Mafic granite pod

5885, b Biotite-qz schist

5887 Pink granite (subconcordant
layer)

Small pods of diopside-rich calc-
silicate

70 Way Point

massive ? dioritic gneiss (charnockitic appearance) cut by thin pink aplite veins. ? Dykes of ? mafic granulite ^(-25 cm) - quite continuous, but prob. metamorphosed. Cut by pink granite veins (1000/cm)

5888, 9	Dioritic gneiss
5890	mafic granulite
5891	Pink aplite

71 Cape Charcot

Much like Jones Rocks (see RJT notebook)

Dip 162/30

5893 Felsic gneiss

5894 Mafic dyke (like 5892) (BH 24)

5892 mafic dyke (similar to, s 11 to 5894)

(72)

SE Fishland Bay

St. layered metasediments on headland,
including much white gt. host leucogneiss,
gt.-bearing charnockitic layers ^(melt?) some
mafic layers with garnet, st quartzite
(± sillimanite) etc. Strongly foliated
dip ~ 215/80. Interlayered

pyroxene gneiss are brown weathering

Cut by mafic dyke, trend ~ 130°.

Somewhat sheared at margin, but may post-date

5895 ^{nearby mylonite} St-sill quartzite

5896 Even grained charnockitic pyroxene
gneiss

5897 Pyroxite-bearing rock (float)

5898 St-bearing charnockitic vein (melt)
in pyroxene gneiss

5899 St-Bi felsic gneiss (intrusive)

5900 Garnet leucogneiss (white layers)

5901 Even grained pyroxene gneiss

5902 Dolomite (trend 130; 5m) (BH 25)

very fine, and contains much
biotite. It occurs as xenoliths
in the garnet charnockite which
also veins and intrudes it.

6/2/86

(73) Outcrop - 1 km S of camp

Mafic granulite (or amphibolite)
Somewhat foliated and lensed
• cut by pegmatitic veins

5903 Mafic gneiss

Mafic gneiss just to E of
rather contorted and locally quite
fine and biotite-rich. It
is cut by granitic veins (subconcordant) -
massive but foliated near margins.

The foliation distinctly K-feldspar (the mafic

5904 Felsic gneiss | layering and

probably the pegmatitic segregation
in the mafic gneiss

5905 Volcanic dyke (prob. basaltic) 50

and may be predominantly
amphibolite.

5906 Mafic gneiss

The gneisses are folded by F_2 folds & are

Cut by pink biotite pegmatites

General dip of gneiss $\sim 190/90^\circ$

The F_2 mafic is interlayered with
garnet gneiss to the NE (300/ Lake)

Also present is massive felsic gneiss.

5907 Garnet gneiss

5908 Felsic pyroxene gneiss

⑦④ Bluff to NW of Lake

Eastern end is garnet gneiss -

rather massive, but well layered

Some pegmatitic segregations, and layers

Dip $340/80$

5909 Garnet gneiss

(NW of Lake)

Further west, is mainly felsic gneiss

The gneiss is ~~fine~~
generally, charnockitic on
fresh surfaces (dark grey), but
some ~~thin~~ granitic layers are
quite pink

5910, 1 Felicit gneiss

Dolerite dyke Trend $\sim 90^\circ$
 ~ 40 cm

5912 Dolerite dyke

(75) N. Taylor Islands (Dome Rock)

Rather massive felsic gneiss, including
leucogneiss and dark greyish-brown
weathering felsic gneiss (? pyroxene or biotite)
Some mafic granulate layers

Dip 230/50

Cut by thin (~ 1 m) mafic dyke
with dark, elongated phenocrysts (trend 100°)

5913 Mafic dyke (8-10)

5914 Mafic granulite

5915, 6 Felicitic gneiss

(76) N Taylor Islands (Green etc)

mostly layered pyroxene gneiss —
mafic pyroxene gneiss with much biotite
Trend ~ NS

Cut by mafic dykes.

5917 mafic dyke trend 65

5918 mafic dyke trend 90

5919/20 mafic dyke (possibly calcic)
trend 60.

5919/20 ^{apparently} is the same dyke, but
somewhat different in colour (20 is
a pinkish, 19 dk grey). It is cut by
5918, although exposure is not good

5921 mafic dyke ($\frac{1}{2}$ - 1 m) trend 80

5922 mafic dyke trend 70 (1 m)

Some garnet gneiss, cut by
aphite veins (? prob. but not in situ)
5923 mafic granulite (v. massive)
5924 Aphite

(77) N Taylor Islands (highest ridge)

massive charnockitic felsic gneiss,
some more mafic lenses

5925, 26 felsic gneiss

(78) S Taylor Islands (NE section)

Predominantly massive charnockitic
felsic gneiss like last locality
Some relatively mafic lenses, and granitic
pegmatite veins etc.

Cut by dolerite dyke

5927, 8 felsic gneiss

5929 Dolerite dyke (trend 125)

The gneiss is massive but
contains widely distributed mafic

marked fabric, and also has some
coarser grained pegmatitic veins &
segregations.

In fresh surfaces, the gneiss
is greyish-white, rather than the
dark grey typical of fresh characteristic
felsic gneiss

(79) Taylor Is S (SF outcrop)

mainly felsic gneiss like last
localities, and has probable mafic
dyke (not in situ) - st porphyritic

5930 felsic gneiss

5931 mafic dyke

7/2
80

Centre of Charnockite body

Massive charnockite - even grained,
rather than megacrystic. Fairly homogeneous
over a large area. Some conspicuous biotite &c.
are present. Small mylonite zone cut
the charnockite

5932,3 Charnockite

5934,5 Charnockite

A slight fabric is apparent, but
only hint of layering

⑧ lake on E side of charnockite

massive charnockite, but rather less so
than previous localities. Cut by
1m doleritic dyke, trend 145°

5936 Dolerite dyke BH27

5937 Charnockite

pyroxene green - massive band
somewhat layered, including mafic
layers, and pegmatite layers

5938 Pyroxene green

Second dolomite beds $\sim 130^\circ$ (~ 1 m)

5939 Dolomite dyke (BH28)

Just to W is the contact with
the charnockite; it is not well exposed
but appears to be ^{more or less} conformable,

with the pyrox green. It is
rather deformed. The charnockite prob.
crosses the pyrox green near the contact

5940 Charnockite near contact

5941 Charnockite

~~5842 Dolomite dyke (6 m thick, 145)~~

1/2/86

(82) N. contact of charnockite

- 5942 massive pyroxene gneiss (charnockite?)
5943 fine grained massive charnockite, ^{pyroxene} gneiss (layered?)
5944 fine grained ~~my~~ pyroxene gneiss (charnockite?)
from near contact

Charnockite becomes fine grained near contact with more layered pyroxene gneiss

However, they are difficult to distinguish apart from the somewhat layered nature of the latter

To NW is mainly more layered pyroxene gneiss with some mafic layers. There are some interlayers of gneiss, but these are subordinate

- 5945 layered pyroxene gneiss
5946 Garnet gneiss
5947 Charnockite from near road, place
5948 Dolomite dike (Grd - 145', ~6m)
(dip 250/60)

Section 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 20

Sarnet greenschist cut by porphyritic
dolerite dyke - plagioclase phenocrysts

5949 Dolerite dyke (tent ~80, 3-4m) (BH29)

5950 Sarnet greenschist

McQueen et al 1972
age CPSL 16 433-8

Hirny Charnockite

YAORM

YINUT

~~YIOP~~

Shoreline

RUYPE

YAHND

YIOP

COLLECTING

Rock WYKEL

AND

FURTHER

A FIELD

YASUP

~~YIOP~~

ANY

PROBLEMS

WITH HOLIDAY

ARRANGEMENTS

YANEC

WISSA

JOHN

WYNOB

Shore

RUYRO

YIOP

YIOP

YAORM

Can.

YASUP

YALC

YANEC

WYUCH JOHN



